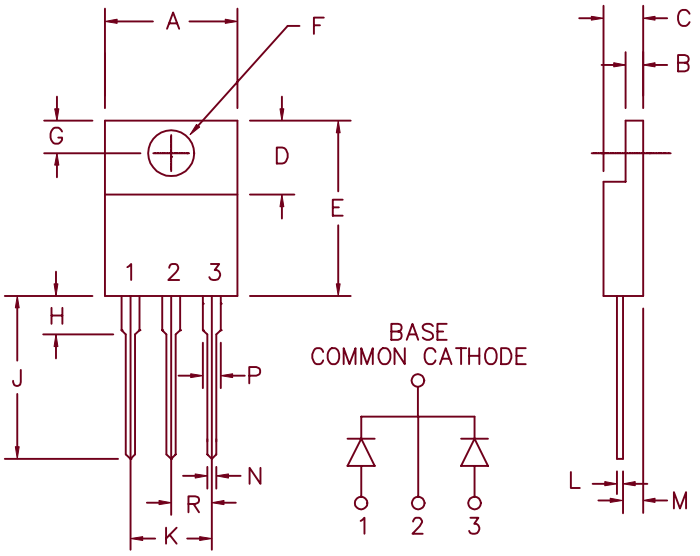
Ultra Fast Recovery Rectifiers

UFT2010 – UFT2020



Dim.	Inches		Millimeter		
	Minimum	Maximum	Minimum	Maximum	Notes
A	.390	.415	9.91	10.54	
B	.045	.055	1.14	1.40	
C	.180	.190	4.57	4.83	
D	.245	.260	6.22	6.60	
E	.550	.650	13.97	16.51	
F	.139	.161	3.53	4.09	Dia.
G	.100	.135	2.54	3.43	
H	---	.250	---	6.35	
J	.500	.580	12.70	14.73	
K	.190	.210	4.83	5.33	
L	.014	.022	.357	.559	
M	.080	.115	2.03	2.92	
N	.015	.040	.380	1.02	
P	.045	.070	1.14	1.78	
R	.090	.110	2.29	2.79	

PLASTIC TO-220AB

Microsemi Catalog Number	Repetitive Peak Reverse Voltage	Transient Peak Reverse Voltage
UFT2010	100V	100V
UFT2015	150V	150V
UFT2020	200V	200V

- Ultra Fast Recovery Rectifier
- 175°C Junction Temperature
- V_{RRM} 100 TO 200 Volts
- 2 x 10 Amps current rating
- t_{RR} 35 nsec maximum

Electrical Characteristics

Average forward current per pkg	$I_{F(AV)}$ 20 Amps	T_C = 151°C, Square wave, $R_{\theta JC}$ = 1°C/W
Average forward current per leg	$I_{F(AV)}$ 10 Amps	T_C = 151°C, Square wave, $R_{\theta JC}$ = 2°C/W
Maximum surge current	I_{FSM} 200 Amps	8.3ms, half sine, T_J = 175°C
Max peak forward voltage	V_{FM} 0.95 Volts	I_{FM} = 10A; T_J = 25°C*
Max reverse recovery time	t_{RR} 35 ns	1/2A, 1A, 1/4A, T_J = 25°C
Max peak reverse current	I_{RM} 10 µA	V_{RRM}, T_J = 25°C
Typical junction capacitance	C_J 70pF	V_R = 10V, T_J = 25°C

*Pulse test: Pulse width 300 µsec, Duty cycle 2%

Thermal and Mechanical Characteristics

Storage temp range	T_{STG}	-55°C to 175°C
Operating junction temp range	T_J	-55°C to 175°C
Max thermal resistance per leg	$R_{\theta JC}$	2.0°C/W Junction to Case
Max thermal resistance per pkg.	$R_{\theta JC}$	1.0°C/W Junction to Case
Mounting torque		10-15 inch pounds
Weight		0.08 ounces (2.3 grams) typical

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UFT2010 – UFT2020

Figure 1
Typical Forward Characteristics – Per Leg

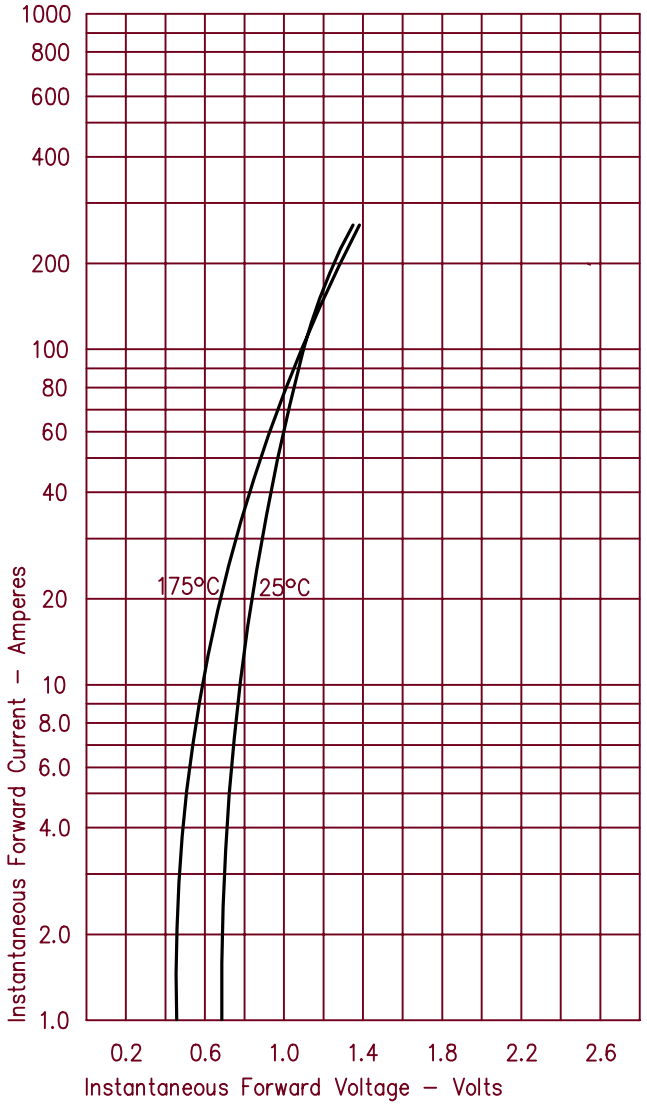

Figure 2
Typical Reverse Characteristics – Per Leg

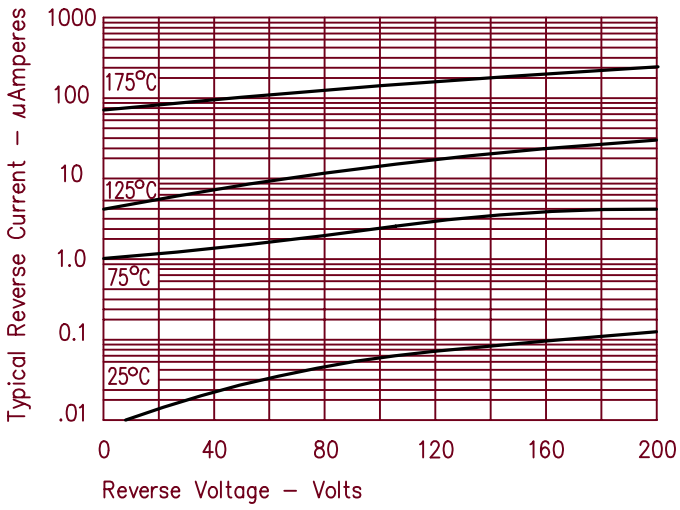

Figure 3
Typical Junction Capacitance – Per Leg

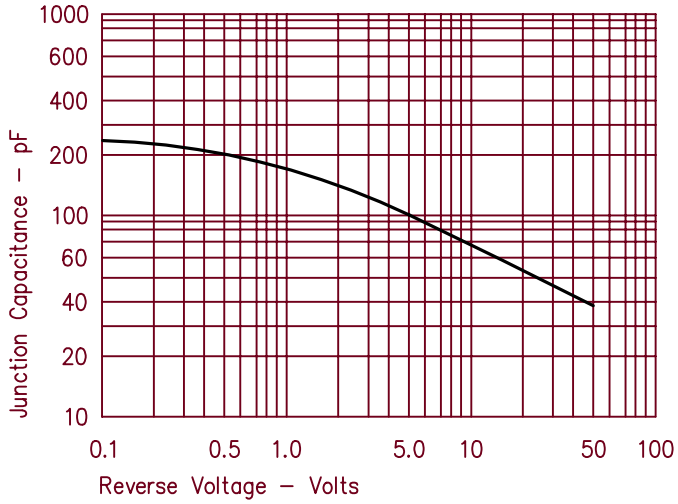

Figure 4
Forward Current Derating – Per Leg

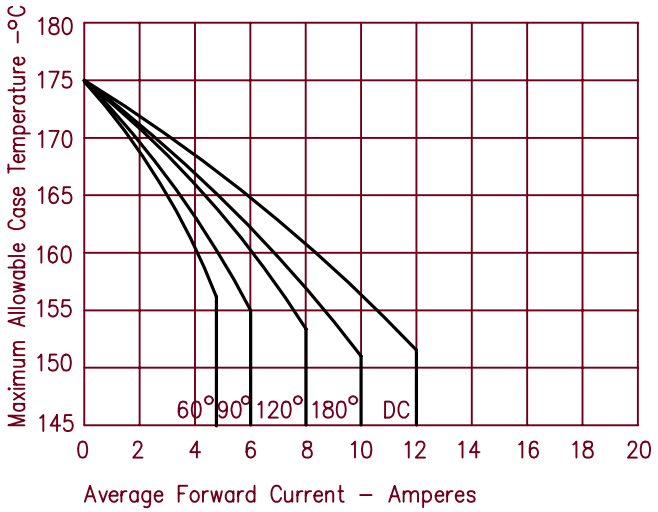

Figure 5
Maximum Forward Power Dissipation – Per Leg